4.2 Transportation/Circulation

The following summarizes the findings of the Grantville Redevelopment Traffic Impact Analysis (Katz, Okistu & Associates, November, 2004). The traffic study technical report is provided in Volume II Appendix B of this EIR.

4.2.1 Existing Conditions

4.2.1.1 Methodologies

The traffic analysis examines existing (Year 2004) and Horizon Year (Year 2030) timeframes. Street system operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. The Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). A more detailed description of LOS is provided in the traffic technical study (see Volume II, Appendix B of this EIR).

Roadway Segment Capacity Analysis. The City of San Diego has published daily traffic volume standards for roadways within its jurisdiction. To determine existing service levels on study area roadway segments, a comparison was made among the appropriate average daily traffic thresholds for level of service, the daily capacity of the study area roadway segments, and the existing and future volumes in the study area.

Intersection Capacity Analysis. The analysis of peak hour intersection performance was conducted using the Traffix analysis software program, which uses the "operational analysis" procedure for signalized intersections as defined in the Highway Capacity Manual (2000 HCM). This technique uses 1,900 passenger cars per hour of green per lane (pcphgpl) as the maximum saturation flow of a single lane at an intersection. This saturation flow rate is adjusted to account for lane width, on-street parking, conflicting pedestrian flow, traffic composition (i.e., percent of trucks) and shared lane movements (e.g., through and right-turn movements from the same lane). Level of service for signalized intersections is based on the average time (seconds) that vehicles entering an intersection are stopped or delayed.

The Highway Capacity Manual analysis method for evaluating unsignalized, minor street stop intersections is based on the average total delay for each impeded movement. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. This time includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation.

4.2.1.2 Existing Circulation Network

Streets and highways in the study area that could be impacted by the proposed project include Fairmount Avenue, Friars Road, Mission Gorge Road, and Waring Road.

Fairmount Avenue. Fairmount Avenue consists of two separate segments, Interstate 8 (I-8) to Mission Gorge Road and Mission Gorge Road to Sheridan Lane. Between I-8 and Mission Gorge Road, Fairmount Avenue is classified as a four-lane major road with posted speeds of 30 MPH. The segment between Mission Gorge Road and Sheridan Lane is a two-lane collector street servicing light industrial and business uses. Parking is limited to the segment between Mission Gorge Road and Sheridan Lane. Bus service is only provided on the segment of Fairmount Avenue between I-8 and Mission Gorge Road. No bike lanes are provided.

Friars Road. Friars Road is classified as a 6-lane primary arterial, which runs in an east-west direction between Interstate 15 (I-15) and Mission Gorge Road. Speeds are posted at 50 MPH. At the east end of the segment, the through movement becomes Mission Gorge Road and Friars Road effectively ends. Bus service is provided on Friars Road between I-15 and Rancho Mission Road via Route 13, but there is no service on the segment between Rancho Mission Road and Mission Gorge Road. There are no bike lanes on Friars Road.

Mission Gorge Road. Mission Gorge Road consists of two separate segments, between Fairmount Avenue and Friars Road and between Friars Road and Jackson Drive. Between Fairmount Avenue and Friars Road, Mission Gorge Road is a 4-lane north-south major roadway with existing bus service. Speeds are posted along this segment at 30 MPH. Mission Gorge Road is an east-west arterial between Friars Road and Jackson Drive, with a majority of the roadway classified as a 6-lane primary arterial transitioning to a 6-lane major roadway. However, the segment of Old Cliffs Road to Katelyn Court is a 4-lane roadway and the segment of Katelyn Court to Princess View Drive is a 5-lane roadway. The posted speeds range on these segments between 45 and 55 MPH and no bus service is provided along this route. There is an existing shared bicycle route (class III) along this segment.

Waring Road. Waring Road is classified as a north-south 4-lane major roadway, which provides access to I-8. Speeds are posted along this segment at 35 MPH. Existing bus service is provided along the entirety of this route by bus Routes 40 and 13. In addition, an existing bicycle route (Class III) is provided between Zion Avenue and Princess View Drive.

4.2.1.3 Daily Roadway Segment Operations

Table 4.2-1 and Figure 4.2-1 summarize the results of the existing daily roadway segment analysis. All roadway segments currently operate at LOS D or better except:

- Friars Road between I-15 North Bound Ramps and Rancho Mission Road (LOS E)
- Fairmount Avenue between I-8 East Bound Off Ramp and Camino Del Rio North (LOS F)

4.2.1.4 Peak Hour Intersection Performance

Table 4.2-2 summarizes the existing peak hour operating conditions for the study intersections. Figures 4.2-2 and 4.2-3 show existing morning and evening peak hour traffic volumes for study intersections. The worksheets used in this analysis are provided in the traffic study technical report (Appendix B) of this EIR.

TABLE 4.2-1
Existing Daily Roadway Segment Conditions

Roadway Segment	Lanes/ Classification	LOS E Capacity	Average Daily Traffic (ADT)	Volume to Capacity Ratio	Level of Service
Friars Road					
I-15 NB Ramps to Rancho Mission Road	6 Lane Prime	60,000	59,881	1.00	E
Rancho Mission Road to Santo Road	6 Lane Prime	60,000	46,477	0.78	C
Fairmount Avenue					
I-8 EB Off Ramp to Camino Del Rio North	4 Lane Major	40,000	48,581	1.22	F
Mission Gorge Road					
Mission Gorge Place to Twain Avenue	4 Lane Major	40,000	26,268	0.66	C
Twain Avenue to Vandever Avenue	4 Lane Major	40,000	23,041	0.58	C
Friars Road to Zion Avenue	6 Lane Prime	60,000	42,915	0.72	C
West of Princess View Drive	5 Lane Prime	50,000	23,717	0.47	B
West of Jackson Drive	6 Lane Major	50,000	18,703	0.37	A
Waring Road					
Zion Avenue to Twain Avenue	4 Lane Major	40,000	16,771	0.42	B
South of Twain Avenue	4 Lane Major	40,000	18,705	0.47	B

Notes: NB = North Bound, EB = East Bound
Source: Katz, Okitsu & Associates, 2004.

TABLE 4.2-2
Existing Peak Hour Intersection Conditions

Intersection	AM Peak Hour		PM Peak Hour	
	Average Intersection Delay (sec.)	Level of Service	Average Intersection Delay (sec.)	Level of Service
1. Friars & I-15 SB Ramps	24.8	C	33.8	C
2. Friars & I-15 NB Ramps	6.7	A	10.5	B
3. Friars & Rancho Mission Rd	18.7	B	16.6	B
4. Friars & Mission Gorge Rd	13.3	B	26.4	C
5. Zion & Mission Gorge Rd	32.0	C	30.2	C
6. Princess View & Mission Gorge Rd	14.5	B	14.9	B
7. Jackson & Mission Gorge Rd	14.7	B	11.8	B
10. Twain & Mission Gorge Rd	30.9	C	38.4	D
11. Fairmont Ave & Mission Gorge Rd	15.8	B	19.2	B
12. Cam. Del Rio/ I-8 WB Off & Fairmount Ave	72.8	E	141.3	F
13. Fairmont Ave & I-8 WB On Ramp*	0.0	A	0.0	A
14. I-8 EB On and Off Ramps & Fairmount Ave	19.8	B	17.5	B
25. Zion & Waring Rd	25.5	C	26.2	C
26. Twain & Waring Rd	15.4	B	13.2	B

Notes: * = Unsignalized Intersection
Source: Katz, Okitzu & Associates, 2004.

As shown, all intersections operate at LOS D or better in the morning peak hour except:

- Camino Del Rio/I-8 WB Off & Fairmount Avenue (LOS E).

4.2.2 Impact Threshold

For the purposes of this EIR, a significant impact would occur if the proposed project would:

- *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).*

To determine project impacts, the City of San Diego has developed a series of thresholds based on allowable increases in volume-to-capacity ratios, which become more stringent as level of service worsens. Table 4.2-3 summarizes these thresholds.

The acceptable level of service for roadway segments and intersections in San Diego is level of service D. However, for undeveloped areas, the goal is to achieve level of service C. Where roadway segments and intersections operate at LOS D or better, findings of significant impacts may occur, but no mitigation is required. Where the roadway segment is forecast to operate at LOS E or F, and the increase v/c or delay is greater than 0.02 or the delay increases by more than two seconds, the determination of significance (Yes/No) is shown in bold type to indicate a significant project impact.

TABLE 4.2-3
Significant Transportation Impact Measure

Level of Service With Project	Allowable Increase/Decrease Due to Project Impacts*		
	Intersections	Roadway Sections	
	Delay (Sec)	V/C	Speed (MPH)
A	N/A	0.10	5
B	6	0.06	3
C	4	0.04	2
D**	2	0.02	1
E**	2	0.02	1
F**	2	0.02	1

Notes: V/C = Volume/Capacity Ratio

* =If a proposed project's traffic impacts exceed the values shown in the above table, then the impacts are deemed "significant." The project applicant shall identify "feasible mitigations," to bring the facility back to the level previously held by the facility prior to the project's traffic impacts.

** = The acceptable level of service standard for roadways and intersections in San Diego is level of service D. However, for undeveloped locations, the goal is to achieve a level of service C.

Source: City of San Diego Traffic Impact Manual, 1998.

4.2.3 Impact

The proposed action is to redevelop areas within the Navajo Community Planning Area. Future redevelopment activities will be in accordance with the applicable development regulations at the time specific redevelopment activities are proposed (e.g., zoning ordinance). The inherent nature of redevelopment tends to readjust the intensity of land use in the study area. Therefore, existing land use intensities were summarized and then compared to the proposed land use intensities to estimate the change caused by the redevelopment. This net change was used to calculate the increase, or decrease, of traffic in the project area. Any change in current land intensity results in a change of traffic on the surrounding roadway network.

4.2.3.1 Project Trip Generation

Vehicular traffic generation characteristics for projects are estimated based on rates in the City of San Diego's Trip Generation Manual (dated September 1998). This manual provides standards and recommendations for the probable traffic generation of various land uses based upon local, regional and nation-wide studies of existing developments in comparable settings. Appendix C of the traffic technical study (see Volume II, Appendix B) contains excerpts from the trip generation manual used in this analysis. Table 4.2-4 summarizes anticipated trip generation based on existing community plan land use designation. As shown in Table 4.2-4, redevelopment activities according to the existing Community Plan would add 31,606 daily trips to the circulation network with 3,280 trips occurring in the morning peak hour and 4,346 trips occurring during afternoon peak hour. The project impacts are analyzed in the 2030 "Horizon Year" scenario.

4.2.3.2 Project Access

The broad nature of and diversity of land use throughout the redevelopment area necessitates that generalized access points will dictate access throughout the redevelopment area. Project redevelopment in the Grantville Redevelopment Area will take access on the primary, adjacent streets including Friars Road, Mission Gorge Road, Waring Road, Princess View Road, Twain Avenue, Jackson Drive, and Fairmount Avenue.

4.2.3.3 Parking

Adequate parking should be assured by the developers per the San Diego Municipal Code, which establishes parking requirement for development within the City of San Diego.

4.2.3.4 Project Trip Distribution

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that project related traffic will likely affect. Trip distribution information can be estimated from observed traffic patterns, experience or through use of appropriate travel demand models. Trip distributions for this analysis are derived from both observed patterns and a SANDAG Series 10 Select Zone Analysis. For purposes of this analysis, the Select Zone Analysis was used in conjunction with observed patterns and then split into 18 groups defined by geographic area. A distribution was assumed for each area relative to location. Appendix D of the traffic technical study (see Volume II, Appendix B) shows both the location of the land use groups and the distributions used for each.

TABLE 4.2-4
Trip Generation for the Proposed Project

Land Use	Intensity	Trip Rate	Per	Daily Trips	AM Trips	In	Out	PM Trips	In	Out
Community Plan Land Use Intensities										
Neighborhood Commercial	-241 KSF	72	KSF	-17,366	-695	-417	-278	-1,910	-955	-955
Community Shopping Center	349 KSF	49	KSF	17,087	513	308	205	1,709	854	854
Specialty Retail/ Strip Commercial	195 KSF	36	KSF	7,018	211	126	84	632	316	316
Industrial (Manufacturing/ Assembly)	4,110 KSF	4	KSF	16,439	3,288	2,959	329	3,288	658	2,630
Industrial (Business Park)	629 KSF	16	KSF	10,057	1,207	398	809	1,207	241	966
Industrial (Small Industrial Park)	371 KSF	15	KSF	5,569	613	551	61	668	134	535
Industrial (Large Industrial Park)	1,036 KSF	8	KSF	8,285	911	820	91	994	199	795
Commercial Office	-169 KSF	20	KSF	-3,161	-411	-370	-41	-443	-89	-354
Institutional (Library)	-69 KSF	20	KSF	-1,379	-28	-19	-8	-138	-69	-69
Residential Single Family	48 DU	10	DU	485	39	8	31	48	34	15
Residential Multi-Family	86 DU	8	DU	686	55	11	44	69	48	21
Religious Facility	-117 KSF	9	KSF	-1,054	-42	-34	-8	-84	-42	-42
Park (Developed)	-19 AC	50	AC	-957	-38	0	0	-77	0	0
Industrial Extraction (Quarry)	-101 AC	100	AC	-10,114	-1,517	-1,062	-455	-1,618	-647	-971
Agriculture	-1 AC	2	AC	-1	0	0	0	0	0	0
Hospital	0 KSF	20	KSF	0	0	0	0	0	0	0
Commercial Recreation (Golf)	2 AC	8	AC	12	1	1	0	1	0	1
TOTAL COMMUNITY PLAN TRIPS				**31,606**	**4,107**	**3,280**	**863**	**4,346**	**682**	**3,741**

Notes: KSF = thousand square feet, DU = dwelling units, AC = acres
Source: City of San Diego Trip Generation Manual, September 1998.

Figure 4.2-4 shows the increase in trips that the proposed project would add to the circulation network using the distributions shown in Appendix D of the traffic technical study.

The Grantville trolley station, located on Alvarado Canyon Road, is under construction as part of the Mission Valley East (MVE) extension of the Blue Line light rail corridor. The station is one of four new stations located along the line. The 5.9-mile MVE extension will connect the Blue and Orange lines, completing a loop that will give San Diegans new mobility and easier access to some of the region's most popular destinations and commercial and employment centers, including San Ysidro, Downtown, Old Town, Mission Valley, La Mesa, El Cajon, and SDSU. Connecting bus service will be offered at the Grantville Station. MTS is scheduled to complete construction on the extension in 2005 with operation beginning in June 2005. This new trolley stop will bring alternative transit opportunities to the project area. This transit opportunity will decrease the amount of vehicle trips generated by the redevelopment. However, the traffic analysis does not assume the five percent reduction for any of the study area. Therefore, the traffic analysis is a conservative estimate of traffic generated by the project.

4.2.3.5 Horizon Year (Year 2030) Conditions

Horizon Year volumes were collected from the SANDAG Series 10 future forecast model. These volumes are assumed to include redevelopment traffic; therefore, project trips were backed out of the forecasted volumes to estimate base conditions. Horizon Year conditions assume that no circulation network improvements will be in place.

Planned Improvements. Katz, Okitsu & Associates reviewed the City of San Diego Capital Projects Program (CPP) to determine if any funded improvements are planned for the study area. No new CIP improvements are planned for the study area under both the existing and horizon year scenarios. No developer impact fee programs are in place either. In order to be conservative, it has been assumed that no future improvements are in place in the Horizon Year; however, the community plan identifies a number of transportation improvements, as discussed below.

The Navajo Community Plan (adopted in 1982) suggests that Mission Gorge Road be widened to a six-lane facility north of Zion Avenue with no left-turn lanes except at signalized intersections. The existing conditions analysis revealed that the majority of the roadway is a 6-lane facility. However, the segment of Old Cliffs Road to Katelyn Court is a 4-lane roadway and the segment of Katelyn Court to Princess View Drive is a 5-lane roadway. The only non-intersection left-turn lane along the corridor is approximately 150 feet north of Princess View Drive where a southbound left-turn lane serves the existing retail.

The Community Plan also states that Mission Gorge Road be improved to a six-lane major street between Fairmount Avenue and Interstate 8. The existing conditions analysis showed that this has not yet been completed.

The Navajo Community Plan identifies the following circulation improvements. The community plan identifies the extension of Navajo Road east of College Avenue connecting to Waring Road. The community plan specifies that this extension should be designed to parkway standards and limited to a two-lane facility with four lanes at the intersection with College Avenue and Waring Road.

The following improvements are specified in the Tierrasanta Community Plan but are not found in the Navajo Community Plan. These three improvements, which would affect the Navajo Community Plan area, are the extensions of Santo Road, Princess View Drive and Jackson Drive into the Tierrasanta Community. These three extensions have not been included in the analysis.

Daily Roadway Segment Performance. Table 4.2-5 summarizes the horizon year conditions both with and without the project. Figure 4.2-5 graphically presents the results of this analysis.

Table 4.2-5 shows that without the project all segments operate at LOS D or better except:

- Friars Road from I-15 North Bound Ramps to Rancho Mission Road (LOS F);
- Friars Road from Rancho Mission Road to Santo Road (LOS E);

TABLE 4.2-5
Horizon Year 2030 Daily Roadway Segment Conditions with the Community Plan Project

Roadway Segment	Lanes/Class	Horizon without Project			Project Added	Horizon with Project			Comparison	
		ADT	V/C	LOS		ADT	V/C	LOS	Increase in V/C	Sig?
Friars Road										
I-15 NB Ramps to Rancho Mission Road	6/Prime	69,000	1.165	F	7,900	77,800	1.297	F	0.132	Yes
Rancho Mission Road to Santo Road	6/Prime	56,500	0.942	E	7,900	64,400	1.073	F	0.132	Yes
Fairmont Avenue										
I-8 EB Off Ramp to Camino Del Rio North	4/Major	59,500	1.488	F	17,100	76,600	1.915	F	0.428	Yes
Mission Gorge Road										
Mission Gorge Place to Twain Avenue	4/Major	37,200	0.930	E	17,100	54,300	1.358	F	0.428	Yes
Twain Avenue to Vandever Avenue	4/Major	33,900	0.848	D	17,100	51,000	1.275	F	0.428	Yes
Friars Road to Zion Avenue	6/Prime	52,400	0.873	D	6,300	58,700	0.978	E	0.105	Yes
West of Princess View Drive	5/Prime	33,200	0.664	C	6,300	39,500	0.790	C	0.126	No
West of Jackson Drive	6/Major	28,200	0.564	C	6,300	34,500	0.690	C	0.126	No
Waring Road										
Zion Avenue to Twain Avenue	4/Major	16,100	0.403	B	2,700	18,800	0.470	B	0.067	No
South of Twain Avenue	4/Major	18,000	0.450	B	2,700	20,700	0.518	B	0.067	No

Notes: V/C = Volume/Capacity Ratio
Sig = Significant

Source: Katz, Okitsu & Associates, 2004

- Fairmount Avenue from I-8 East Bound Off Ramp to Camino Del Rio North (LOS F); and,
- Mission Gorge Road from Mission Gorge Place to Twain Avenue (LOS E).

With the addition of Community Plan project traffic, the following segments would be significantly impacted:

- Friars Road from I-15 North Bound Ramps to Rancho Mission Road (LOS F);
- Friars Road from Rancho Mission Road to Santo Road (LOS F);
- Fairmount Avenue from I-8 East Bound Off Ramp to Camino Del Rio North (LOS F);
- Mission Gorge Road from Mission Gorge Place to Twain Avenue (LOS F);
- Mission Gorge Road from Twain Avenue to Vandever Avenue (LOS F); and,
- Mission Gorge Road from Friars Road to Zion Avenue (LOS E).

Peak Hour Intersection Performance. Table 4.2-6 summarizes the results of the peak hour intersection performance analysis and the significance of the project's impacts. Figures 4.2-6 and 4.2-7 show the horizon year morning and evening peak hour intersection turning movements without the project. Figures 4.2-8 and 4.2-9 show the horizon year morning and evening peak hour intersection turning movements with the project. Appendix E of the traffic technical study (see Volume II, Appendix B of this EIR) contains the worksheets used in this analysis.

The following intersections would be significantly impacted by the proposed project:

- Friars Road & I-15 South Bound Ramps (PM Peak hour);
- Friars Road & Mission Gorge Road (PM Peak hour);
- Twain & Mission Gorge Road (AM and PM Peak hours);
- Fairmount Avenue & Mission Gorge Road (AM and PM Peak hours);
- Camino Del Rio & I-8 West Bound Off Ramp & Fairmount Avenue (AM and PM Peak hours); and,
- I-8 East Bound On and Off Ramps & Fairmount Avenue (AM Peak hour).

Ramp Meter Analysis. Ramp meter analysis was also conducted for the proposed project. This analysis indicates impacts would occur to the following ramp meter locations:

- Friars Road to I-15 North (AM Peak hour);
- Friars Road to I-15 South (loop) (PM Peak Hour); and,
- Friars Road (HOV) to I-15 North (PM Peak Hour).

Tables 9a and 9b provided in the traffic technical appendices (see Volume II, Appendix B) summarizes the peak operating conditions for the freeway ramp meters.

TABLE 4.2-6
Year 2030 Peak Hour Intersection Conditions with the Community Plan Project

Intersection	2030 Without		2030 With		Increase in Delay (sec.)	Significant?
	Delay (sec.)	Level of Service	Delay (sec.)	Level of Service		
AM Peak Hour						
1. Friars & I-15 SB Ramps	42.5	D	43.8	D	1.3	No
2. Friars & I-15 NB Ramps	8.3	A	8.2	A	-0.1	No
3. Friars & Rancho Mission Rd	25.1	C	25.8	C	0.7	No
4. Friars & Mission Gorge Rd	17.6	B	48.0	D	30.4	No
5. Zion & Mission Gorge Rd	42.4	D	54.7	D	12.3	No
6. Princess View & Mission Gorge Rd	22.9	C	28.9	C	6.0	No
7. Jackson & Mission Gorge Rd	15.0	B	15.7	B	0.7	No
10. Twain & Mission Gorge Rd	48.5	D	151.5	F	103.0	Yes
11. Fairmont Ave & Mission Gorge Rd	18.6	B	77.0	E	58.4	Yes
12. Cam. Del Rio/ I-8 WB Off & Fairmount Ave	138.0	F	268.1	F	130.1	Yes
13. Fairmont Ave & I-8 WB On Ramp*	0.0	A	0.0	A	0.0	No
14. I-8 EB On and Off Ramps & Fairmount Ave	25.0	C	77.2	E	52.2	Yes
25. Zion & Waring Rd	26.5	C	33.1	C	6.6	No
26. Twain & Waring Rd	15.6	B	15.8	B	0.2	No
PM Peak Hour						
1. Friars & I-15 SB Ramps	67.2	E	86.0	F	18.8	Yes
2. Friars & I-15 NB Ramps	16.5	B	22.3	C	5.8	No
3. Friars & Rancho Mission Rd	24.5	C	24.7	C	0.2	No
4. Friars & Mission Gorge Rd	50.9	D	161.1	F	110.2	Yes
5. Zion & Mission Gorge Rd	40.3	D	50.4	D	10.1	No
6. Princess View & Mission Gorge Rd	24.1	C	22.2	C	-1.9	No
7. Jackson & Mission Gorge Rd	13.3	B	14.5	B	1.2	No
10. Twain & Mission Gorge Rd	70.0	E	177.6	F	107.6	Yes
11. Fairmont Ave & Mission Gorge Rd	25.1	C	133.8	F	108.7	Yes
12. Cam. Del Rio/ I-8 WB Off & Fairmount Ave	222.1	F	387.9	F	165.8	Yes
13. Fairmont Ave & I-8 WB On Ramp*	0.0	A	0.0	A	0.0	No
14. I-8 EB On and Off Ramps & Fairmount Ave	19.8	B	26.4	C	6.6	No
25. Zion & Waring Rd	26.6	C	31.1	C	4.5	No
26. Twain & Waring Rd	13.3	B	13.7	B	0.4	No

Notes: * = Unsignalized Intersection, NB = North Bound, SB = South Bound, EB = East Bound, WB = West Bound

Source: Katz, Okitsu & Associates, 2004

4.2.4 Significance of Impact

Proposed redevelopment activities based on existing community plan land uses are anticipated to add 31,606 daily trips to the circulation network with 3,280 trips occurring in the morning peak hour and 4,346 trips occurring during afternoon peak hour.

The following roadway segments would be significantly impacted:

- Friars Road from I-15 North Bound Ramps to Rancho Mission Road (LOS F);
- Friars Road from Rancho Mission Road to Santo Road (LOS F);
- Fairmount Avenue from I-8 East Bound Off Ramp to Camino Del Rio North (LOS F);
- Mission Gorge Road from Mission Gorge Place to Twain Avenue (LOS F);
- Mission Gorge Road from Twain Avenue to Vandever Avenue (LOS F); and,
- Mission Gorge Road from Friars Road to Zion Avenue (LOS E).

The following intersections would be significantly impacted:

- Friars & I-15 South Bound Ramps (PM Peak hour);
- Friars & Mission Gorge Road (PM Peak hour);
- Twain & Mission Gorge Road (AM and PM Peak hours);
- Fairmount Avenue & Mission Gorge Road (AM and PM Peak hours);
- Camino Del Rio & I-8 WB Off Ramp & Fairmount Avenue (AM and PM Peak hours); and,
- I-8 EB On and Off Ramps & Fairmount Avenue (AM Peak hour).

The following ramp meter locations would be significantly impacted:

- Friars Road to I-15 North (AM Peak hour);
- Friars Road to I-15 South (loop) (PM Peak Hour); and,
- Friars Road (HOV) to I-15 North (PM Peak Hour).

4.2.5 Mitigation Measures

T1 Improvements identified within the Navajo and Tierrasanta Community Plans shall be implemented as sufficient financial resources become available through the establishment of the proposed redevelopment project area. These improvements include:

- Widen Mission Gorge Road to a six-lane facility north of Zion Avenue with no left-turn lanes except at signalized intersections.

- Widen Mission Gorge Road to a six-lane major street between Fairmount Avenue and Interstate 8.
- Improve Mission Gorge Road to a six-lane major street between Fairmount Avenue and Interstate 8.

The Navajo Community Plan (adopted in 1982) suggests the widening of Mission Gorge Road to a six-lane facility north of Zion Avenue with no left-turn lanes except at signalized intersections as well as the widening of Mission Gorge Road to a six-lane major street between Fairmount Avenue and Interstate 8.

Mission Gorge Road north of Zion Avenue is a 6-lane facility for most of its length. However, the segment of Old Cliffs Road to Katelyn Court is a 4-lane roadway and the segment of Katelyn Court to Princess View Drive is a 5-lane roadway. The only non-intersection left-turn lane along the corridor is approximately 150 feet north of Princess View Drive where a southbound left-turn lane serves the existing retail. The Grantville Redevelopment Traffic Impact Analysis analyzed the Mission Gorge Road segments north of Friars Road as 5-lane prime arterials west of Princess View Drive and a 6-lane major arterials for the segments west of Jackson Drive. The widening of Mission Gorge Road at the 4-lane and 5-lane segments would improve the vehicle capacity along these segments. However, the analysis found that no existing or future capacity constraint exists and the roadway segments operate in the worst-case at LOS C.

The Navajo Community Plan also states that Mission Gorge Road be improved to a six-lane major street between Fairmount Avenue and Interstate 8. This improvement has not yet been completed and the roadway is classified as a 4-lane major street. Table 4.2-7 shows that the impact that widening this segment to 6-lanes would have on the Level of Service for the Community Plan scenario. The level of service on this segment would remain an LOS F with this improvement under the Community Plan; and therefore, the impact is considered significant and unavoidable.

TABLE 4.2-7
Horizon Year 2030
Mitigated Daily Roadway Segment Conditions

Street Segment	Horizon with Project (4-Lane Major)			Horizon with Project (6-Lane Major)			Increase in V/C
	ADT	V/C	LOS	ADT	V/C	LOS	
Fairmont Avenue							
I-8 East Bound Off Ramp to Camino Del Rio North	76,600	1.915	F	76,600	1.532	F	-.383

Notes: V/C = Volume/Capacity Ratio
ADT = Average Daily Trip

Source: Katz, Okitsu & Associates, 2004.

4.2.6 Conclusion

The following roadway segments would be significantly impacted as a result of proposed redevelopment activities:

- Friars Road from I-15 North Bound Ramps to Rancho Mission Road (LOS F);
- Friars Road from Rancho Mission Road to Santo Road (LOS F);
- Fairmount Avenue from I-8 East Bound Off Ramp to Camino Del Rio North (LOS F);
- Mission Gorge Road from Mission Gorge Place to Twain Avenue (LOS F);
- Mission Gorge Road from Twain Avenue to Vandever Avenue (LOS F); and,
- Mission Gorge Road from Friars Road to Zion Avenue (LOS E).

The following intersections would be significantly impacted as a result of proposed redevelopment activities:

- Friars & I-15 South Bound Ramps (PM Peak hour);
- Friars & Mission Gorge Road (PM Peak hour);
- Twain & Mission Gorge Road (AM and PM Peak hours);
- Fairmount Avenue & Mission Gorge Road (AM and PM Peak hours);
- Camino Del Rio & I-8 West Bound Off Ramp & Fairmount Avenue (AM and PM Peak hours); and,
- I-8 East Bound On and Off Ramps & Fairmount Avenue (AM Peak hour).

The following ramp meter locations would be significantly impacted as a result of proposed redevelopment activities:

- Friars Road to I-15 North (AM Peak hour);
- Friars Road to I-15 South (loop) (PM Peak Hour); and,
- Friars Road (HOV) to I-15 North (PM Peak Hour).

Implementation of mitigation measures identified in the preceding section will reduce the impact to the extent feasible; however, the impact to traffic circulation will remain significant and unavoidable.